

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98055-4056

In the matter of the petition of

Delta Air Lines, Inc.

Regulatory Docket No. 27608

for an exemption from §§ 25.813(e) and
121.310(f)(5) of the Federal Aviation
Regulations

DENIAL OF EXEMPTION

By letters dated February 11, 1994, February 24, 1994, and March 16, 1994, Mr. Russell H. Heil, Senior Vice President, Technical Operations, Delta Air Lines, Inc., General Offices, Hartsfield Atlanta International Airport, Atlanta, Georgia 30320-6001, petitioned for an amendment to existing Delta Exemption 5413, which currently provides relief from § 121.310(f)(5) of the Federal Aviation Regulations (FAR) for a single MD-11 interior configuration, to include relief from § 25.813(e) and to increase its applicability to permit installation of, and operations with, a door between passenger compartments on four additional interior configurations of the MD-11 airplane.

Sections of the FAR affected:

Sections 25.813(e) and 121.310(f)(5) both state that no door may be installed in any partition between passenger compartments.

Related sections of the FAR:

Sections 25.813(d) and 121.310(f)(4) both state that if it is necessary to pass through a passageway between passenger compartments to reach any required emergency exit from

any seat in the passenger cabin, the passageway must be unobstructed. However, curtains may be used if they allow free entry through the passageway.

Sections 25.813(f) and 121.310(f)(6) both state that if it is necessary to pass through a doorway separating the passenger cabin from other areas to reach any required emergency exit from any passenger seat, the door must have a means to latch it in the open position. These sections also provide structural criteria for these doors.

The petitioner's supportive information is as follows:

"FAA has issued Exemption 5413 (amended to 5413B) for FAR Section 121.310(f)(5) to allow Delta Air Lines to install a door between the business class and first class sections of the MD-11 cabin subject to the following conditions and limitations:

1. The exemption is limited to:
 - a) the interior arrangements described in McDonnell Douglas Drawing No. J055178, Revision F, or later FAA approved revision, and
 - b) a total seating capacity of 248.
2. The galley door must be fastened open during taxi, takeoff, and landing, and must be placarded accordingly. Dual retention means are required.
3. Compliance is required with all relevant emergency exit marking requirements, whether the door is either open or closed, when viewed from either side. The means of opening the door must be marked on both sides of the door and must be obvious to untrained individuals under emergency lighting conditions."

"FAA has also issued Exemption 5405 for FAR Section 25.813(e) to allow McDonnell Douglas Corporation to install a door between the business class and first class sections of the MD-11 cabin subject to the following conditions and limitations:

1. The exemption is limited to the interior arrangements described in McDonnell Douglas Drawing No. J055178 Revision F, or later FAA approved revision.
2. The galley door must be fastened open during taxi takeoff, and landing, and must be placarded accordingly. Dual retention means are required.
3. Compliance is required with all relevant emergency exit marking requirements, whether the door is either open or closed, when viewed from either side. The means of

opening the door must be marked on both sides of the door and must be obvious to untrained individuals under emergency lighting conditions."

"In the Spring of 1994, Delta plans to initiate MD-11 operations in the North Atlantic. As the business requirements for these operations are different than those for our current MD-11 operations, which are limited primarily to the Pacific, a cabin modification will be required. The new cabin arrangement, which is defined below, will increase the passenger seat count slightly by increasing the size of the tourist cabin and reducing the size of the business cabin. However, in the area of the cabin near the interior door (i.e., first class and forward portion of business class), the cabin configuration is identical to that defined in McDonnell Douglas Drawing No. J055178 Revision F, with the exception of adding two first class seats in place of a decorative pedestal. The total seat count is still much below the maximum approved for the MD-11, and the seating density in first class and business class is very low. Therefore, we believe the analyses that demonstrated Exemptions 5413 and 5405 would not adversely affect safety are valid for the new cabin arrangement.

"In order that the new cabin arrangement may be certificated and operated, Delta Air Lines, Inc. hereby petitions for amendment to Exemption 5413 to add FAR Section 25.813(e) and provide relief from FAR Sections 121.310(f)(5) and 25.813(e) to the extent necessary to allow installation of a door between the business class and first class sections of the MD-11 aircraft subject to the following conditions and limitations:

1. The exemption is limited to the interior arrangements described in McDonnell Douglas Drawing No. J055178 Revision F, or later FAA approved revision, and Delta Drawing Nos. 00-0338 Revision A, 00-0339 Revision A, 00-0340; and 00-0341, or later FAA approved revisions.
2. The galley door must be fastened open during taxi, takeoff, and landing, and must be placarded accordingly. Dual retention means are required.
3. Compliance is required with all relevant emergency exit marking requirements, whether the door is either open or closed, when viewed from either side. The means of opening the door must be marked on both sides of the door and must be obvious to untrained individuals under emergency lighting conditions."

"The door installation significantly increases the marketability of Delta's MD-11 aircraft and is an essential part of our product offering. This amendment would be in the public interest because, as FAA states in Exemption 5413, it is in the public interest to promote aviation by facilitating the increased marketability of aircraft when safety is not adversely affected. The analyses performed by FAA during processing of Exemptions 5413 and 5405 have demonstrated that this amendment would not adversely affect safety.

"Delta plans to begin cabin modifications in March 1994. As this amendment is essentially administrative in nature and the issues pertaining to safety and public interest were resolved in Exemptions 5413 and 5405, expedited processing of this request without publication comment in accordance with the provisions of FAR Sections 11.27(j)(3)(i) and (ii) is requested."

MD-11 Configuration Summary

"The configuration defined in McDonnell Douglas Drawing No. J055178 was addressed in Exemptions 5413 and 5405 and is currently operated by Delta Air Lines.

"The configuration defined in Delta Drawing No. 00-0341 is identical to that defined in McDonnell Douglas Drawing No. J055178, with two seats replacing the decorative pedestal in first class.

"The configuration defined in Delta Drawing No. 00-0338 Revision A is that defined in Delta Drawing No. 00-0341 with a flight crew sleeping quarters installation.

"The configuration defined in Delta Drawing No. 00-0340 is identical to that defined in McDonnell Douglas Drawing No. J055178, with two seats replacing the decorative pedestal in first class and expanded tourist class.

"The configuration defined in Delta Drawing No. 00-0339 Revision A is that defined in Delta Drawing No. 00-0340 with a flight crew sleeping quarters installation.

"The following supplemental information is provided:

1. Delta's current MD-11 configuration (McDonnell Douglas Drawing No. J055178 Revision F) has a maximum seating capacity of 248 (16 first, 53 business, 179 tourist).
2. We plan a modification program that will result in two basic configurations derived from our current configuration. The first differs from our current configuration only in that two first class seats replace the decorative pedestal in first class. The second differs from our current configuration in that two first class seats replace the decorative pedestal in first class, business class is reduced, and tourist class is expanded.
3. We also must provide for installation of our flight crew sleeping quarters module (crew rest) on the new configurations; therefore, a total of four new configurations can result."

"The configurations are summarized in the following table:

	<u>Config.</u>	<u>Dwg No.</u>	<u>First Class Seats</u>	<u>Business Class Seats</u>	<u>Tourist Class Seats</u>	<u>Total Seats</u>
1.	Current	McD-Doug. J055178 Rev. F	16	53	179	248
2.	New	Delta 00-0341	18	53	179	250
3.	New. Same as 2. with crew rest.	Delta 00-0338 Rev. A	18	53	164	235
4.	New	Delta 00-0340	18	32	215	265
5.	New. Same as 4. with crew rest.	Delta 00-0339 Rev. A	18	32	195	245

"The analysis which supported Exemption 5413 is valid for our new configurations. We should note that the original analysis considered the case where all passengers in the forward zone would exit through door 2 along with all passengers in the mid zone. In that case, the number of passengers in the forward zone (16) and the mid zone (71), when combined (87), was less than the rating for door 2 (110). For the configuration defined in Delta Drawing No. 00-0340, which we requested in our current petition to be included in an amended Exemption 5413, the total of passengers in the forward zone (18) and mid zone (95) is 113. Therefore, additional substantiation that this configuration will provide an acceptable level of safety is provided as follows:

- 1 . Only 18 passengers are located in the forward zone, virtually eliminating the need for dual aisle flow out of that zone. If all of these passengers were added to the passengers located in the mid zone, the total of 113 is far less than the individual zone capacity for a zone bounded by Type A exits (220), per FAA Advisory Circular 25.807-1 "Uniform Distribution of Exits."
2. Data from actual evacuation demonstrations by the manufacturer (McDonnell Douglas) demonstrates that the total number of passengers that can be evacuated through doors

2, 3, and 4 exceeds the total seating capacity (265) of the configuration defined in Delta Drawing No. 00-0340. The data is summarized as follows:

<u>Aircraft Type</u>	<u>Test Date</u>	<u>Total Passengers Evacuated Through Doors 2, 3, and 4</u>
DC-10 Series 10	1971	293
DC-10 High Density	1972	315
MD-11 platform test, time limit reduced to 62 seconds"	1992	349

It is noted that the petitioner did not observe the requirement of § 11.25(b)(1) to file a petition for exemption at least 120 days before the proposed effective date of the exemption, a fact which has impacted the FAA's ability to respond in a timely manner to the petitioner's needs. The petitioner did seek a waiver from the requirements regarding publication of a summary of petition for exemption, in accordance with the provisions of § 11.27(j)(3)(i) & (ii). That request was denied, based on the adverse comments received prior to the issuance of Exemption 5413 and the fact that one of the currently proposed configurations is of greater capacity than that defined in Exemption 5405. Both of those considerations require the FAA to re-evaluate the appropriateness of the exemptions granted initially. Accordingly, a summary of Delta's petition was published in the Federal Register on March 30, 1994 (59 FR 14949). No comments were received. However, it was subsequently noticed that the Federal Register publication of the summary mis-identified the operating rule from which relief was requested, in that it referred to § 212.310. The summary was then re-published correctly in the Federal Register on June 6, 1994 (59 FR 29321).

Two comments were received. An aviation-related consumer group and an organization representing flight attendants presented various arguments opposing the proposed door for reasons relating to its perceived adverse effect on emergency egress capability. Both commenters also pointed out that Delta has failed to substantiate its claim that the proposed installation would result in increased marketability and competitiveness. The commenters assert that comparable doors are not offered on any of Delta's competitors, in either the Pacific Rim or North Atlantic markets, and that no evidence is offered to indicate that passengers choose an airplane based on this feature. One commenter characterized the proposal as an "...unproved marketing gimmick designed to make first-class passengers feel more elite."

The FAA's analysis/summary is as follows:

Section 11.25(b)(5) of the FAR requires, in part, that the petitioner must show why the requested action would not adversely affect safety, or, alternatively, why the requested action would provide a level of safety equal to that provided by the rule(s) from which exemption is

sought. In addition, § 11.25(b)(5) requires the petitioner to include reasons why the requested action would be in the public interest.

Since the issuance of Exemptions 5405 and 5413, and in light of the comments received, the FAA has reevaluated both the petitioner's statement of reasons why granting the petition would be in the public interest and its statement of reasons why granting the petition would not have an adverse effect on safety.

In Exemptions 5413 through 5413B, the FAA concluded that the low passenger density in the proposed configuration would "compensate" for any degradation due to the single-aisle flow and not result in an overall adverse impact on safety, given the egress capability of the exits. However, in those grants, the FAA acknowledged that the dual aisle passenger flow would be preferable to flow limited to a single aisle in the event that the proposed door is closed at the time of an emergency evacuation.

The petitioner's sole public interest justification is that "the door installation significantly increases the marketability of Delta's MD-11 aircraft and is an essential part of our product offering." The petitioner has offered no evidence to support these conclusions, and, without substantiation, the FAA finds them to be factually questionable and unconvincing as a basis for finding that the grant would be in the public interest.

In the light of this, the FAA has determined that granting such a petition would not be in the public interest.

In consideration of the foregoing, I find that a grant of exemption is not in the public interest.

Therefore, pursuant to the authority contained in §§ 313(a) and 601(c) of the Federal Aviation Act of 1958, delegated to me by the Administrator (14 CFR 11.53), the petition of Delta Air Lines, Inc., for an amendment to existing Delta Exemption 5413, which currently provides relief from § 121.310(f)(5) of the FAR for a single MD-11 interior configuration, to include relief from § 25.813(e) and to increase its applicability to permit installation of, and operations with, a door between passenger compartments on four additional interior configurations of the MD-11 airplane, is hereby denied.

Issued in Renton, Washington, on August 26, 1994.

/s/ Ronald T. Wojnar
Manager, Transport Airplane Directorate
Aircraft Certification Service